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EXAMINER VAN HANDEL, MICHAEL P				
ART UNIT 2623		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/931,577

Applicant(s)

NEGISHI ET AL.

Examiner

MICHAEL VAN HANDEL

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 14, 27-30, 32-43, 45, 46, 48-52, 78 and 95-115 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 14, 27-30, 32-43, 45, 46, 48-52, 78 and 95-115 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is responsive to an Amendment filed 1/16/2008. Claims **1, 14, 27-30, 32-43, 45, 46, 48-52, 78, 95-115** are pending. Claims **2-13, 15-26, 31, 44, 47, 53-77, 79-94** are canceled. Claims **1, 14, 27-30, 32-43, 45, 46, 48-51, 78** are amended. Claims **95-115** are new.

Response to Arguments

1. Applicant's arguments regarding claims **1, 14, 27, 40, 78, 95, and 105** have been considered, but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **27-30, 32-39, 95-104** are rejected under 35 U.S.C. 102(e) as being anticipated by Kalra et al.

Referring to claim **27**, Kalra et al. discloses a data transmitting apparatus for transmitting a scene description that describes at least one elementary stream (ES) used to construct a scene (Abstract), comprising:

- an ES processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side (digital data is transcoded into adaptive, scalable streams)(col. 2, l. 27-30, 39-43; col. 3, l. 66, 67; col. 4, l. 1-13; col. 15, l. 35-50; col. 16, l. 18-24; & Fig. 1);
- a scene description processing means for transferring and modifying a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description (a VRML scene graph must be modified to correspond to the adaptive streams)(col. 19, l. 47-64; col. 20, l. 47-50; col. 21, l. 61-67; col. 22, l. 37-53; & Fig. 17).

Referring to claim **28**, Kalra et al. discloses a data transmitting apparatus according to claim 27, further comprising:

- a memory means in which a plurality of predefined scene descriptions are stored corresponding to a plurality of possible qualities of the at least one ES (a bare bones scene graph and additive scene graphs corresponding to the adaptive streams are stored)(col. 21, l. 61-67; col. 22, l. 1; & Fig. 17);
- wherein the scene description processing means selects the scene description from among the plurality of scene descriptions stored in the memory means, and transmits the scene description (more levels of detail in the scene graph are transmitted depending on the performance of the client device)(col. 22, l. 1-53, 66-67 & col. 23, l. 1-3, 8-57).

Referring to claim **29**, Kalra et al. discloses a data transmitting apparatus/method according to claim 27, further comprising:

- a memory means in which at least one predefined scene description is stored (col. 20, l. 30-39);
- wherein the scene description processing means converts a predefined scene description read from the memory means into the scene description based on the corresponding quality of the at least one ES (col. 21, l. 61-67 & col. 22, l. 1), and transfers the scene description (col. 23, l. 40-43).

Referring to claim **30**, Kalra et al. discloses a data transmitting apparatus according to claim 27, wherein the scene description processing means encodes the scene description and transmits the scene description (col. 23, l. 8-27).

Referring to claim **32**, Kalra et al. discloses a data transmitting apparatus according to claim 27, wherein the scene description processing means transfers the scene description, which comprises information necessary for the receiving side to decode the at least one ES from the ES processing means (col. 23, l. 38-46).

Referring to claim **33**, Kalra et al. discloses a data transmitting apparatus according to claim 27, further comprising wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not (col. 23, l. 28-30, 45-47).

Referring to claim **34**, the combination of Kalra et al. discloses a data transmitting apparatus according to claim 27, wherein the scene description processing means transfers a scene description whose complexity conforms to the at least one ES (col. 23, l. 47-57).

Referring to claim **35**, Kalra et al. discloses a data transmitting apparatus according to claim 34, wherein the scene description processing means transfers a scene description, wherein

a first scene part within a scene is replaced with a second scene part whose complexity is different from the complexity of the first scene part, in accordance with the at least one ES (col. 24, l. 28-37).

Referring to claim **36**, Kalra et al. discloses a data transmitting apparatus according to claim 34, wherein the scene description processing means transfers a scene description, in which a scene part within a scene is removed or a new scene part is added to the scene, in accordance with the at least one ES (col. 23, l. 45-47 & col. 25, l. 9-11).

Referring to claim **37**, Kalra et al. discloses a data transmitting apparatus according to claim 34, wherein the scene description processing means modified a quantization step, in which a scene description is encoded, in accordance with the at least one of the transmission line state and the request issued from the receiving side, and the at least one ES (col. 5, l. 57-67).

Referring to claim **38**, Kalra et al. discloses a data transmitting apparatus according to claim 27, wherein the scene description processing means divides a scene description into a plurality of decoding units in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES (col. 21, l. 61-66).

Referring to claim **39**, Kalra et al. discloses a data transmitting apparatus according to claim 38, wherein the scene description processing means adjusts a time interval between time instants at which the receiving side decodes each of the plurality of decoding units into which a scene description is divided (col. 23, l. 40-50).

Referring to claim **95**, Kalra et al. discloses a data receiving apparatus for receiving a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:

- an ES decoding unit that receives at least one ES, which conforms to at least one of a transmission line state and a request issued from the data receiving apparatus (col. 15, l. 35-44; col. 23, l. 31-57; & Fig. 24);
- a scene description decoding unit for constructing a scene description, in which the properties assigned to the ES within the scene description conform to the at least one ES (col. 23, l. 60-67).

Referring to claim **96**, Kalra et al. discloses a data receiving apparatus according to claim 95, wherein the scene description is transmitted from a server side which includes a scene description processing unit that selects the scene description from among the plurality of scene descriptions stored in a memory, and transmits the scene description (col. 22, l. 1-53, 66-67 & col. 23, l. 1-3, 8-57).

Referring to claim **97**, Kalra et al. discloses a data receiving apparatus according to claim 95, wherein the scene description is transmitted from a server side which converts a predefined scene description read from a memory into a scene description based on the corresponding quality of the at least one ES (col. 21, l. 61-67 & col. 22, l. 1), and transmits the scene description (col. 23, l. 40-43).

Referring to claim **98**, Kalra et al. discloses a data receiving apparatus according to claim 95, wherein the scene description specifies whether the at least one ES is to be used to construct the scene (col. 23, l. 28-30, 45-47).

Referring to claim **99**, Kalra et al. discloses a data receiving apparatus according to claim 95, wherein the scene description complexity conforms to the at least one ES (col. 23, l. 47-57).

Referring to claim **100**, Kalra et al. discloses a data receiving apparatus according to claim 99, wherein the scene decoding unit receives a scene description, wherein a first scene part within a scene is replaced with a second scene part whose complexity is different from the complexity of the first scene part, in accordance with the at least one ES (col. 24, l. 28-37).

Referring to claim **101**, Kalra et al. discloses a data receiving apparatus according to claim 99, wherein the scene description decoding unit receives a scene description, in which a scene part within a scene is removed or a new scene part is added to the scene, in accordance with the at least one ES (col. 23, l. 45-47 & col. 25, l. 9-11).

Referring to claim **102**, Kalra et al. discloses a data receiving apparatus according to claim 99, wherein the scene description is received in portions encoded based on a quantization step, in accordance with the at least one of the transmission line state, a request issued from the data receiving apparatus, and the at least one ES (col. 5, l. 57-67).

Referring to claim **103**, Kalra et al. discloses a data receiving apparatus according to claim 95, wherein the scene description is received in a plurality of divided parts encoded by a transmitting apparatus in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES (col. 21, l. 61-66).

Referring to claim **104**, Kalra et al. discloses a data receiving apparatus according to claim 103, wherein the scene transmitting apparatus adjusts a time interval between time instants at which the data receiving apparatus decodes each of the plurality of divided parts into which the scene description is divided (col. 23, l. 40-50).

Art Unit: 2623

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **1, 14, 27-30, 32-43, 45, 46, 48-52, 78, 105-115** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalra et al. in view of Applicant's admitted prior art (see corresponding publication US 2002/0031188 for relevant citations).

Referring to claims **1, 14, 40, and 78**, Kalra et al. discloses a data transmission system/method comprising:

- a transmitting apparatus (stream server 400) that transmits a scene description (col. 19, l. 46-64; col. 23, l. 40-44; & Figs. 12-14, 18A-C, 21); and
- a receiving apparatus (client computer #1-N) that constructs a scene according to the scene description (col. 2, l. 39-43; col. 23, l. 31-57; & Figs. 12-14);
- wherein the transmitting apparatus comprises:
 - o an elementary stream (ES) processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving apparatus (col. 2, l. 27-30, 39-43; col. 3, l. 66, 67; col. 4, l. 1-13; col. 15, l. 35-50; & Fig. 1); and
 - o a scene description processing means that transfers and modifies a scene description to conform to a corresponding quality of the at least one ES from the ES processing means by adjusting the properties assigned to the ES within

the scene description (col. 19, l. 47-64; col. 21, l. 61-67; col. 22, l. 37-53; & Fig. 17).

Kalra et al. further discloses that the content is provided based on network bandwidth (col. 15, l. 35-44). Kalra et al. does not specifically disclose appending time information to the at least one ES and the scene description to allow the receiving apparatus to detect a delay in transmission. Applicant's admitted prior art discloses appending time instant information to data transmitted over a transmission line. A receiving terminal can use the time instant information to detect a delay in transmission from the time instant information and transmits the detected information to the transmitter (p. 1, paragraph 10). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the bandwidth detection of Kalra et al. to monitoring timing information in transmitted data packets, such as that taught by Applicant's admitted prior art in order to recover lost data.

Referring to claim **41**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, further comprising:

- a memory means in which a plurality of predefined scene descriptions are stored corresponding to a plurality of possible qualities of the at least one ES (col. 21, l. 61-67; col. 22, l. 1; & Fig. 17);
- wherein the scene description processing means selects the scene description from among the plurality of scene descriptions stored in the memory means, and transmits the scene description (col. 22, l. 1-53, 66-67 & col. 23, l. 1-3).

Referring to claim **42**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, further comprising:

- a memory means in which at least one predefined scene description is stored (col. 20, l. 30-39);
- wherein the scene description processing means converts a predefined scene description read from the memory means into the scene description based on the corresponding quality of the at least one ES (col. 21, l. 61-67 & col. 22, l. 1), and transfers the scene description (col. 23, l. 40-43).

Referring to claim **43**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, wherein the scene description processing means encodes the scene description and transmits the scene description (col. 23, l. 8-27).

Referring to claim **45**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, wherein the scene description processing means transfers the scene description, which comprises information necessary for the receiving side to decode the at least one ES from the ES processing means (col. 23, l. 38-46).

Referring to claim **46**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, respectively, further comprising wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not (col. 23, l. 28-30).

Referring to claim **48**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, wherein the scene description processing means transfers a scene description, wherein a first scene part within a scene is

replaced with a second scene part whose complexity is different from the complexity of the first scene part, in accordance with the at least one ES (col. 24, l. 28-37).

Referring to claim **49**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, wherein the scene description processing means transfers a scene description, in which a scene part within a scene is removed or a new scene part is added to the scene, in accordance with the at least one ES (col. 23, l. 45-47).

Referring to claim **50**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, wherein the scene description processing means modified a quantization step, in which a scene description is encoded, in accordance with the at least one of the transmission line state and the request issued from the receiving side, and the at least one ES (col. 5, l. 57-67).

Referring to claim **51**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 40, wherein the scene description processing means divides a scene description into a plurality of decoding units in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES (col. 21, l. 61-66).

Referring to claim **52**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data transmitting method according to claim 51, wherein the scene description processing means adjusts a time interval between time instants at which the receiving side decodes each of the plurality of decoding units into which a scene description is divided (col. 23, l. 40-50).

Referring to claim **105**, Kalra et al. discloses a data receiving method for receiving a scene description that describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:

- receiving at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side (col. 15, l. 35-44; col. 23, l. 31-57; & Fig. 24); and
- receiving a scene description in accordance with the corresponding quality of the at least one ES (col. 23, l. 60-67);

Kalra et al. further discloses that the content is provided based on network bandwidth (col. 15, l. 35-44). Kalra et al. does not specifically disclose appending time information to the at least one ES. Applicant's admitted prior art discloses appending time instant information to data transmitted over a transmission line. A receiving terminal can use the time instant information to detect a delay in transmission from the time instant information and transmits the detected information to the transmitter (p. 1, paragraph 10). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the bandwidth detection of Kalra et al. to monitoring timing information in transmitted data packets, such as that taught by Applicant's admitted prior art in order to recover lost data.

Referring to claim **106**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 105, wherein the scene description is selected from among a plurality of predefined scene descriptions corresponding to a plurality of possible qualities of the at least one ES (col. 22, l. 1-53, 66-67 & col. 23, l. 1-3, 8-57).

Referring to claim **107**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 105, wherein the scene description is created by converting a predefined scene description based on the corresponding quality of the at least one ES (col. 21, l. 61-67 & col. 22, l. 1).

Referring to claim **108**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 105, wherein the scene description further comprises information necessary for the receiving side to decode the at least one ES (col. 23, l. 38-46).

Referring to claim **109**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 105, wherein the scene description specifies whether to use the at least one ES (col. 23, l. 28-30, 45-47).

Referring to claim **110**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 105, wherein in the scene description, a first scene part is replaced with a second scene part, whose complexity differs from the complexity of the first scene part, in accordance with the at least one ES (col. 24, l. 28-37).

Referring to claim **112**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 105, wherein in the scene description, a scene part is removed or added, in accordance with the at least one ES (col. 23, l. 45-47 & col. 25, l. 9-11).

Referring to claim **113**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 105, wherein the scene description is

encoded in a quantization step, in accordance with the at least one transmission line state, the request issued from the receiving side, and the at least one ES (col. 5, l. 57-67).

Referring to claim **114**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 105, wherein the scene description is divided into a plurality of decoding units in accordance with at least one of the transmission line state, the request issued from the receiving side, and the at least one ES (col. 21, l. 61-66).

Referring to claim **115**, the combination of Kalra et al. and Applicant's admitted prior art teaches a data receiving method according to claim 114, wherein the scene description is divided in accordance with a time interval between time instants at which a receiving side decodes each of the plurality of decoding units (col. 23, l. 40-50).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL VAN HANDEL whose telephone number is (571)272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chris Kelley/
Supervisory Patent Examiner, Art Unit
2623

MVH